Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An ink jet printhead comprising:

a plurality of nozzles, each nozzle defining a nozzle aperture having a central axis;

a bubble forming chamber corresponding to each of the nozzles respectively;

~~at least one~~ a plurality of heater ~~element~~ elements disposed in each of the bubble forming chambers respectively, ~~the~~ each heater element being configured for thermal contact with a bubble forming liquid; such that,

heating ~~the~~ each heater element to a temperature above the boiling point of the bubble forming liquid forms a gas bubble that causes the ejection of a drop of an ejectable liquid through the nozzle corresponding to that heater element; wherein,

~~the~~ each heater element is suspended between corresponding electrodes so as to be spaced from the central axis, defines a current path substantially around the central axis, and has a bubble nucleation section defined about the central axis, the bubble nucleation section having a smaller cross section than the rest of the heater element so that the temperature of the bubble nucleation section is heated to above said boiling point before the rest of the heater element, and

the heater elements and associated electrodes in each bubble forming chamber are arranged so that the electrodes are non-coincident.

2. (Previously Presented) The printhead of claim 1 wherein the bubble forming chamber has a circular cross section and the heater element has arcuate sections that are concentric with the circular cross section.

3. (Original) The printhead of claim 2 wherein the heater element is omega shaped and extends between adjacent electrodes in the side of the bubble forming chamber.

4. (Original) The printhead of claim 2 wherein the heater element is ring shaped and extends between electrodes mounted on opposite sides of the bubble forming chamber.

5. (Original) The printhead of claim 1 wherein the bubble forming liquid and the ejectable liquid are of a common body of liquid.

6. (Original) The printhead of claim 1 being configured to print on a page and to be a page-width printhead.

7. (Original) The printhead of claim 1 wherein each heater element is predominantly formed from titanium nitride.

8. (Original) The printhead of claim 1 wherein each heater element is configured such that an actuation energy of less than 500 nanojoules (nJ) is required to be applied to that heater element to heat that heater element sufficiently to form a said bubble in the bubble forming liquid thereby to cause the ejection of a said drop.

9. (Cancelled)

10. (Original) The printhead of claim 1 comprising a substrate having a substrate surface, wherein the areal density of the nozzles relative to the substrate surface exceeds 10,000 nozzles per square cm of substrate surface.

11. (Original) The printhead of claim 1 wherein each heater element has two opposite sides and is configured such that a said gas bubble formed by that heater element is formed at both of said sides of that heater element.

12. (Original) The printhead of claim 1 wherein the bubble which each element is configured to form is collapsible and has a point of collapse, and wherein each heater element is configured such that the point of collapse of a bubble formed thereby is spaced from that heater element.

13. (Original) The printhead of claim 1 comprising a structure that is formed by chemical vapor deposition (CVD), the nozzles being incorporated on the structure.

14. (Original) The printhead of claim 1 comprising a structure which is less than 10 microns thick, the nozzles being incorporated on the structure.

15. (Currently Amended) The printhead of claim 1 comprising a plurality of bubble forming chambers each corresponding to a respective nozzle, ~~and a plurality of said heater elements being disposed within each chamber,~~ the heater elements within each chamber being formed on different respective layers to one another.

16. (Original) The printhead of claim 1 wherein each heater element is formed of solid material more than 90% of which, by atomic proportion, is constituted by at least one periodic element having an atomic number below 50.

17. (Previously Presented) The printhead of claim 1 wherein each heater element is configured for a mass of less than two nanograms of the solid material of that heater element to be heated to a temperature above said boiling point thereby to heat said part of the bubble forming liquid to a temperature above said boiling point to cause the ejection of a said drop.

18. (Previously Presented) The printhead of claim 1 wherein each heater element is covered by a conformal protective coating, the coating of each heater element having been applied substantially to all sides of the heater element simultaneously such that the coating is seamless.

19. (Currently Amended) A printer system which incorporates a printhead, the printhead comprising:

a plurality of nozzles, each nozzle defining a nozzle aperture having a central axis;

a bubble forming chamber corresponding to each of the nozzles respectively;

~~at least one~~ a plurality of heater ~~element~~ elements disposed in each of the bubble forming chambers respectively, ~~the~~ each heater element being configured for thermal contact with a bubble forming liquid; such that,

heating ~~the~~ each heater element to a temperature above the boiling point of the bubble forming liquid forms a gas bubble that causes the ejection of a drop of an ejectable liquid through the nozzle corresponding to that heater element; wherein,

~~the~~ each heater element is suspended between corresponding electrodes so as to be spaced from the central axis, defines a current path substantially around the central axis, and has a bubble nucleation section defined about the central axis, the bubble nucleation section having a smaller cross section than the rest of the heater element so that the temperature of

the bubble nucleation section is heated to above said boiling point before the rest of the heater element, and

the heater elements and associated electrodes in each bubble forming chamber are arranged so that the electrodes are non-coincident.

20. (Previously Presented) The system of claim 19 wherein the bubble forming chamber has a circular cross section and the heater element has arcuate sections that are concentric with the circular cross section.

21. (Original) The system of claim 20 wherein the heater element is omega shaped and extends between adjacent electrodes in the side of the bubble forming chamber.

22. (Original) The system of claim 20 wherein the heater element is ring shaped and extends between electrodes mounted on opposite sides of the bubble forming chamber.

23. (Cancelled)

24. (Original) The system of claim 19 wherein the bubble forming liquid and the ejectable liquid are of a common body of liquid.

25. (Original) The system of claim 19 being configured to print on a page and to be a page-width printhead.

26. (Original) The system of claim 19 wherein each heater element is predominantly formed from titanium nitride.

27. (Original) The system of claim 19 wherein each heater element is configured such that an actuation energy of less than 500 nanojoules (nJ) is required to be applied to that heater element to heat that heater element sufficiently to form a said bubble in the bubble forming liquid thereby to cause the ejection of a said drop.

28. (Cancelled)

29. (Original) The system of claim 19 comprising a substrate having a substrate surface, wherein the areal density of the nozzles relative to the substrate surface exceeds 10,000 nozzles per square cm of substrate surface.

30. (Original) The system of claim 19 wherein each heater element has two opposite sides and is configured such that a said gas bubble formed by that heater element is formed at both of said sides of that heater element.

31. (Original) The system of claim 19 wherein the bubble which each element is configured to form is collapsible and has a point of collapse, and wherein each heater element is configured such that the point of collapse of a bubble formed thereby is spaced from that heater element.

32. (Original) The system of claim 19 comprising a structure that is formed by chemical vapor deposition (CVD), the nozzles being incorporated on the structure.

33. (Original) The system of claim 19 comprising a structure which is less than 10 microns thick, the nozzles being incorporated on the structure.

34. (Currently Amended) The system of claim 19 comprising a plurality of bubble forming chambers each corresponding to a respective nozzle, ~~and a plurality of said heater elements being disposed within each chamber,~~ the heater elements within each chamber being formed on different respective layers to one another.

35. (Original) The system of claim 19 wherein each heater element is formed of solid material more than 90% of which, by atomic proportion, is constituted by at least one periodic element having an atomic number below 50.

36. (Previously Presented) The system of claim 19 wherein each heater element is configured for a mass of less than two nanograms of the solid material of that heater element to be heated to a temperature above said boiling point thereby to heat said part of the bubble forming liquid to a temperature above said boiling point to cause the ejection of a said drop.

37. (Previously Presented) The system of claim 19 wherein each heater element is covered by a conformal protective coating, the coating of each heater element having been applied substantially to all sides of the heater element simultaneously such that the coating is seamless.

38. (Currently Amended) A method of ejecting drops of an ejectable liquid from a printhead, the printhead comprising a plurality of nozzles, each nozzle defining a nozzle aperture having a central axis; a bubble forming chamber corresponding to each of the nozzles respectively; ~~at least one~~ a plurality of heater ~~element~~ elements disposed in each of the bubble forming chambers respectively, ~~the~~ each heater element being configured for thermal contact with a bubble forming liquid; wherein, ~~the~~ each heater element is suspended between corresponding electrodes so as to be spaced from the central axis, defines a current path substantially around the central axis, and has a bubble nucleation section defined about the central axis, the bubble nucleation section having a smaller cross section than the rest of the heater element, the heater elements and associated electrodes in each bubble forming chamber are arranged so that the electrodes are non-coincident, the method comprising the steps of:

heating ~~the~~ each heater element to a temperature above the boiling point of the bubble forming liquid to form a gas bubble that causes the ejection of a drop of the ejectable liquid from the nozzle and so that the temperature of the bubble nucleation section being heated to above said boiling point before the rest of the heater element; and

supplying the nozzle with a replacement volume of the ejectable liquid equivalent to the ejected drop.

39. (Previously Presented) The method of claim 38 wherein the bubble forming chamber has a circular cross section and the heater element has arcuate sections that are concentric with the circular cross section.

40. (Original) The method of claim 39 wherein the heater element is omega shaped and extends between adjacent electrodes in the side of the bubble forming chamber.

41. (Original) The method of claim 39 wherein the heater element is ring shaped and extends between electrodes mounted on opposite sides of the bubble forming chamber.

42. (Original) The method of claim 38 wherein the bubble forming liquid and the ejectable liquid are of a common body of liquid.

43. (Original) The method of claim 38 wherein the printhead is configured to print on a page and to be a page-width printhead.

44. (Original) The method of claim 38 wherein said step of heating the at least one heater element is effected by applying an actuation energy of less than 500nJ to each such heater element.

45. (Cancelled)

46. (Original) The method of claim 38 wherein the printhead includes a substrate on which said nozzles are disposed, the substrate having a substrate surface and the areal density of the nozzles relative to the substrate surface exceeding 10,000 nozzles per square cm of substrate surface.

47. (Original) The method of claim 38 wherein the at least one heater element has two opposing sides and the bubble is generated at both of said sides of each heated heater element

48. (Original) The method of claim 38 wherein the generated bubble is collapsible and has a point of collapse, and is generated such that the point of collapse is spaced from the at least one heater element.

49. (Original) The method of claim 38 wherein the printhead has a structure that is less than 10 microns thick and which incorporates said nozzles thereon.

50. (Original) The method of claim 38 wherein the nozzles of the printhead are formed by chemical vapor deposition (CVD).

51. (Currently Amended) The method of claim 38 wherein the printhead has a plurality of bubble forming chambers each chamber corresponding to a respective nozzle and ~~a~~

~~plurality of said heater elements are formed in each of the chambers, such that~~ the heater elements in each chamber are formed on different respective layers to one another.

52. (Original) The method of claim 38 wherein the heater elements are formed of solid material more than 90% of which, by atomic proportion, is constituted by at least one periodic element having an atomic number below 50.

53. (Previously Presented) The method of claim 38 wherein the heater elements wherein the step of heating at least one heater element comprises heating a mass of less than two nanograms of the solid material of each such heater element to a temperature above said boiling point.

54. (Original) The method of claim 38 wherein a conformal protective coating is applied to substantially to all sides of each of the heater elements simultaneously, such that the coating is seamless.